Application No. 09/937,349
Amdt. dated March 5, 2004
Reply to Office Action of October 8, 2003
Docket No. 2001-1134

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-10. (cancelled)

11. (new) Method for treating a product, which contains cellular material of eukaryotic or prokaryotic origin, which comprises:

bringing the product in a treatment device comprising two electrodes connected to an electronic circuit;

creating an electrical field pulse in said product;

wherein a rise time or leading edge of each imposed voltage pulse is shorter than an associated electronic relaxation time of the product under treatment;

said electronic relaxation time being defined by the ratio of electrical conductivity and permittivity of the product.

- 12. (new) The method according to claim 11, wherein cellular structures present in the product are pathogenic or spoilage organisms, or spores, and treatment is applied as a mild preservation method to prevent the outgrowth of such organisms in the product after production during distribution or storage.
- 13. (new) The method according to claim 12, wherein the cellular structures have membranes, and the product contains

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target compounds selected from the group consisting of minerals, enzymes and molecular compounds which are exchanged at a higher rate through the membranes of the cellular structures when applying the treatment.

- 14. (new) The method according to claim 11, wherein each electrical field pulse has a duration shorter than the relaxation time of the product.
- 15. (new) The method according to claim 11, wherein the dependent on the type of product and target organisms contained in the product, the maximum field strength during a cycle, the repetition frequency and the number of cycles during a treatment are selected such that the target organisms are functionally affected or inactivated leading to a microbiologically safe product having a stable shelf life.
- dependent on the type of product and target cells contained in the product, the maximum field strength reached in a cycle, the repetition frequency and the number of cycles during a treatment are selected such that the target cells are functionally affected, not necessarily inactivated, leading to an enhanced exchange of intracellular compounds with the product.
- 17. (new) The method according to claim 11, wherein the maximum field strength in the product during each pulse, the repetition frequency, the number of cycles and the total

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residence time of the treatment are selected such that the temperature of the product does not exceed a predetermined value during treatment.